



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/590,364

07/06/2007

Chihiro Sawada

129196

6732

25944 7590 07/22/2010
OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

07/22/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com
jarmstrong@oliff.com

| | | | |
|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/590,364 | Applicant(s) SAWADA, CHIHIRO | |
| | Examiner Geoffrey L. Knable | Art Unit 1791 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>11/6/2006; 4/7/2008</u> . | 6) <input type="checkbox"/> Other: ____. |

1. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, as presently phrased, it is difficult to determine what active positive steps are required by the method. In particular, all steps of the method are within "wherein" clauses, it being especially difficult to determine whether for example lines 1-4 are a preamble to the claimed method or are in fact positive required steps in the method. It has been assumed that the claimed method requires all the steps defined in all the lines (including lines 1-4), but clarification of the wording would help avoid ambiguity in this regard. An analogous ambiguity is presented by claim 2.

In claim 1, line 8, no literal antecedent has been established for "said order of arrangement."

In claim 1, line 8, "feeling" should be "feeding".

In claim 4, line 4, the phrase "and the stored at the same location" is awkward and confusing. It is also not clear what is "stored at the same location".

In claim 7, line 4, it appears that "comprising" should be "comprises" since the clamping hand was not previously defined. An analogous ambiguity is present in claim 8.

In claim 7, lines 6-7, the phrase "the chuck have their respective center lines of expansion/contraction" is confusing and renders the claim indefinite. In particular, the singular "chuck" and plural "lines" in this context is not understood. An analogous ambiguity is present in claim 8.

Art Unit: 1791

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Aihara et al. (US 5,433,815).

Aihara et al. discloses a bead member feeding device including an occupied container (6), where beads and separators that define cartridges are stacked and stored, an empty container (8) for the empty separators/cartridges and a bead member handling robot (D) that is adapted to remove beads and separators from an upper side to feed the beads to green tire forming means and to transfer the separators to the empty container - note esp. fig. 1. The reference to the bead members themselves does not at present distinguish the claimed device as they relate to the material worked on by the apparatus rather than being part of the device, it being considered that the separators of Aihara et al. are reasonably capable of supporting different sized beads due to the large area (36) of the separators and radial movement of the grippers (30) for the bead members. A device as required by claim 5 is therefore anticipated. As to

Art Unit: 1791

claim 7, the beads are vertically stacked and the hand includes radially expandable chucks (30).

5. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aihara et al. (US 5,433,815) as applied above, and further in view of EP 875364 to Caretta.

As to claim 6, use of identification codes and readers to control and monitor a tire building process, including the components that are made in to the tire, is taught by EP '364 as a suitable way to allow recording and verifying the correctness of the building tools and component parts used - note col. 21, lines 1-10 of EP '364. In view of this teaching, it would have been obvious to include an identification code and appropriate readers to monitor the beads fed as in Aihara et al. Claim 8 is rejected for the same reasons noted with respect to claim 7.

6. Claims 1, 2, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girard et al. (US 2004/0238102) or JP 08-011232 to Sakamoto taken in view of Aihara et al. (US 5,433,815) and at least one of [Kasai et al. (US 5,232,331) and Katae et al. (US 4,932,828)].

Girard et al. and JP '232 each teach a tire building process in which tires of plural sizes are built on the same line in a desired sequence and thus plural beads of different sizes would need to be stored and fed to the building line but these references do not detail the bead storage or feeding.

Aihara et al. teach a desirable tire bead storage and feeding system in which beads are stacked on individual separators and then sequentially fed to the tire building

Art Unit: 1791

system. A stacked storage system would therefore have been obvious. As to the order of arrangement of the beads, claim 1 specifies that the beads are arranged with an order predetermined according to the production sequence while claim 2 defines that the order is "regardless of the production sequence". Kasai et al. and Katae et al. provide evidence that it is well known in assembly processes to store parts to be assembled in stacks of pallets with removal of appropriate parts/pallets when required. As to the order of arrangement of the beads, Kasai et al. provides evidence that the artisan would have understood the relationship between stacking order and process order and would have been able to select accordingly to achieve the desired feeding efficiency (e.g. col. 32, lines 1+). In particular, Kasai et al. evidences that the stacking order can either be the same as the process order (described as the simplest case; e.g. col. 32, lines 31-40) or can be different from the process order or arbitrary (e.g. col. 33, lines 1-13, 20-23; col. 71, lines 66+). Likewise, Katae et al. evidences that stacked feeding systems conventionally can withdraw parts from any pallet if monitored and appropriately controlled (e.g. col. 1, lines 16+). In view of these teachings, the artisan understands the relationship between stacking order and feeding/process order and further that stacked feeding systems can either stack in the process order or "regardless" of the process order, either being obvious and leading to only the expected and predictable results, including expected and predictable impacts on feeding efficiency. A method as required by claims 1 and 2, as well as an associated device as required by claim 5 and including different beads stacked, would therefore have been

Art Unit: 1791

obvious. As to claim 7, Aihara et al. would suggest that the beads are vertically stacked and the hand includes radially expandable chucks (30).

7. Claims 3, 4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girard et al. (US 2004/0238102) or JP 08-011232 to Sakamoto taken in view of Aihara et al. (US 5,433,815) and at least one of [Kasai et al. (US 5,232,331) and Katae et al. (US 4,932,828)] as applied above, and further in view of EP 875364 to Caretta.

As to claim 3, 4 and 6, both Kasai et al. (e.g. col. 12, lines 9-14; col. 16, lines 46+) and Katae et al. (e.g. col. 5, lines 64+) teach use of appropriate coding and reading the codes when using stacked feeding systems. Further, use of identification codes and readers to control and monitor a tire building process, including the components that are made in to the tire, is taught by EP '364 as a suitable way to allow recording and verifying the correctness of the building tools and components parts used - note col. 21, lines 1-10 of EP '364. In view of these teachings, it would have been obvious to include an identification code and appropriate readers to monitor the beads stacked and fed as in Aihara et al. - only the expected and predictable results would have been achieved. Claim 8 is rejected for the same reasons noted with respect to claim 7.

8. Claim 2 is rejected under 35 U.S.C. 102(a) as being anticipated by WO 2004/048074.

WO '074 (equivalent US 2006/0086451 will be used as effectively a translation of this document; further references will be to this publication) discloses a tire building

Art Unit: 1791

process of building plural tire sizes where the different beads are stored at bead stock

19b. With respect to this bead stock, it is described that:

“With regard to the preset beads PB, they are prepared in a bead stock 19b for each size in advance and the preset beads PB in different sizes are taken up by a bead handing robot 19a according to the requested size so that many sizes are supported.” (paragraph [0096]).

As bead stock 19b apparently contains the different sizes of required beads and since there is no indication otherwise, it is reasonable to conclude that the beads are arranged in the bead stock 19b in an order regardless of the production sequence, the robot selecting a desired bead. As such, this reference is considered to anticipate the claim 2 process.

9. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/
Primary Examiner, Art Unit 1791

G. Knable
July 17, 2010